

**Claims:**

- 1           1.     A water-based, erasable marking composition comprising:  
2                   1 - 86% by weight water;  
3                   0.3 - 38% by weight pigment;  
4                   0 - 85% by weight glycerin; and  
5                   13 - 45% by weight polyurethane, wherein said polyurethane  
6     has a viscosity which increases by at least a factor of 10 when said  
7     polyurethane is dried from a 30% dispersion of said polyurethane in water  
8     to a 65% polyurethane dispersion in water.
- 1           2.     The erasable composition of claim 1, further comprising a  
2     surfactant.
- 1           3.     The erasable composition of claim 2, wherein said surfactant is  
2     a fluorosurfactant present at less than 1% by weight.
- 1           4.     The erasable composition of claim 1, further comprising 0 -  
2     0.5% by weight anti-microbial preservative.
- 1           5.     A water-based, erasable marking composition comprising:  
2                   13 - 69% by weight water;  
3                   5 - 15% by weight glycerin;

4           0.3 - 6% by weight pigment; and  
5           26 - 42.5% by weight polyurethane, wherein said polyurethane  
6 has a viscosity which increases by at least a factor of 10 when said  
7 polyurethane is dried from a 30% dispersion of said polyurethane in water  
8 to a 65% polyurethane dispersion in water.

1           6.     The erasable composition of claim 5, further comprising a  
2 surfactant.

1           7.     The erasable composition of claim 6, wherein said surfactant is  
2 a fluorosurfactant present at less than 1% by weight.

1           8.     The erasable composition of claim 5, further comprising 0 -  
2 0.5% by weight anti-microbial preservative.

1           9.     A water-based, erasable marking composition comprising:

2           52% by weight water;

3           9% by weight glycerin;

4           4% by weight pigment; and

5           35% by weight polyurethane, wherein said polyurethane  
6 has a viscosity which increases by at least a factor of 10 when said  
7 polyurethane is dried from a 30% dispersion of said polyurethane in water  
8 to a 65% polyurethane dispersion in water.

1           10.    The erasable composition of claim 9, further comprising a  
2   surfactant.

1           11.    The erasable composition of claim 10, wherein said surfactant  
2   is a fluorosurfactant present at 0.002 – 0.375% by weight.

1           12.    The erasable composition of claim 9, further comprising 0.05 –  
2   0.15% by weight anti-microbial preservative.

1           13.    An application instrument comprising:

2                   an outer body having a first end;

3                   an applicator at said first end of said outer body;

4                   a reservoir included within said outer body and in fluid  
5   communication with said applicator; and

6                   a water-based, erasable marking composition within said  
7   reservoir, said water-based, erasable marking composition comprising:

8                               1 - 86% by weight water;

9                               0.3 - 38% by weight pigment;

10                              0 - 85% by weight glycerin; and

11                             13 - 45% by weight polyurethane, wherein said polyurethane

12 has a viscosity which increases by at least a factor of 10 when said  
13 polyurethane is dried from a 30% dispersion of said polyurethane in water  
14 to a 65% polyurethane dispersion in water.

1 14. The application instrument of claim 13, wherein said water-  
2 based, erasable marking composition further comprises a surfactant.

1 15. The application instrument of claim 14, wherein said surfactant  
2 is a fluorosurfactant present at less than 1% by weight.

1 16. The application instrument of claim 13, wherein said water-  
2 based, erasable marking composition comprises:

3 13 - 69% by weight water;

4 5 - 15% by weight glycerin;

5 0.3 - 6% by weight pigment; and

6 26 - 42.5% by weight polyurethane, wherein said polyurethane  
7 has a viscosity which increases by at least a factor of 10 when said  
8 polyurethane is dried from a 30% dispersion of said polyurethane in water  
9 to a 65% polyurethane dispersion in water.

1 17. The application instrument of claim 13, wherein said water-  
2 based, erasable marking composition comprises:

3 52% by weight water;

4                   9% by weight glycerin;  
5                   4% by weight pigment; and  
6                   35% by weight polyurethane, wherein said polyurethane  
7 has a viscosity which increases by at least a factor of 10 when said  
8 polyurethane is dried from a 30% dispersion of said polyurethane in water  
9 to a 65% polyurethane dispersion in water.

1           18.   The application instrument of claim 13, further comprising 0.05  
2 - 0.15% by weight anti-microbial preservative.

1           19.   The erasable marking composition of claim 1 wherein the  
2 composition has an erasability of greater than 50%.

1           20.   The erasable marking composition of claim 5 wherein the  
2 composition has an erasability of greater than 50%.